This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) An article comprising:

a substrate; and

a substantially transparent abrasion-resistant coating formed on at least one surface of the substrate, the coating having a refractive index substantially corresponding to a refractive index of the substrate and being formed by curing a coating composition, the coating composition comprising an aqueous-organic solvent mixture containing hydrolysis products and partial condensates of an epoxy functional silane, a metal oxide composite colloid, a disilane and a carboxylic acid functional compound wherein the disilane is represented by the formula $(R^{10}O)_xR^{11}_{3-x}Si\text{-}R^{12}_y\text{-}SiR^{13}_{3-x}(OR^{14})_x$, where x is 0, 1, 2 or 3 and y is 0 or 1, R^{11} and R^{13} are H or an alkyl group containing from about 1 to 10 carbon atoms, a functionalized alkyl group, an alkylene group, an aryl group, an alkylpolyether group and combinations thereof, R^{10} and R^{14} are H, an alkyl group containing from about 1 to 10 carbon atoms, an acetyl group, and combinations thereof, wherein if y is 1 then R^{12} can be an alkylene group containing from about 1 to 12 carbon atoms, an

alkylenepolyether containing from about 1 to 12 carbon atoms, an aryl group, an alkylene substituted aryl group, an alkylene group which may contain one or more olefins, or an oxygen or sulfur atom, and further wherein if x = 0 then R^{11} and R^{13} is a chlorine or bromine atom, and wherein the carboxylic acid functional compound is selected from the group consisting of monofunctional carboxylic acids, multifunctional carboxylic acids, anhydrides, and combinations thereof, and further wherein the epoxy functional silane is present in a molar ratio to the disilane component and the metal oxide composite colloid component of from about 0.1:1 to 4:1.

2. (Original) The article of claim 1 wherein the hydrolysis products and partial condensates of the epoxy functional silane are present in the aqueous-organic solvent mixture in an amount from about 10 to about 90 weight percent, based on the total solids of the composition.

3. (Original) The article of claim 1 wherein the carboxylic acid functional compound is present in the aqueous-organic solvent mixture in an amount of from about .01 to 90 weight percent, based on the total weight of the composition.

4. (Original) The article of claim 1 wherein the disilane component is present in the aqueous-organic solvent mixture in an amount of from about .01 to 85 weight percent, based on the total solids of the composition.

5. (Original) The article of claim 1 wherein the metal oxide composite colloid component is present in the aqueous-organic solvent mixture in an amount of from about .01 to 80 weight percent, based on the total solids of the composition.

6. (Original) The article of claim 1 wherein the solvent constituent of the aqueous-organic solvent mixture is selected from the group consisting of an alcohol, an ether, a glycol ether, an ester, a ketone, a glycolether acetate and combinations thereof.

7. (Original) The article of claim 1 wherein the solvent constituent of the aqueous-organic solvent mixture is an alcohol having the general formula ROH where R is an alkyl group containing from about 1 to about 10 carbon atoms.

8. (Original) The article of claim 1 wherein the solvent constituent of the aqueous-organic solvent mixture is selected from the group consisting of a glycol, an ether, a glycol ether and mixtures thereof having the formula R^1-

$(OR^2)_x$-OR^1 where x is an integer of 0, 1, 2, 3, or 4, R^1 is H or an alkyl group containing from about 1 to about 10 carbon atoms and R^2 is an alkylene group containing from about 1 to about 10 carbons atoms and combinations thereof.

9. (Original) The article of claim 1 wherein the epoxy functional silane present in the aqueous-organic solvent mixture is represented by the formula $R^4_xSi(OR^5)_{4-x}$ where x is an integer of 1, 2 or 3, R^4 is H, an alkyl group, a functionalized alkyl group, an alkylene group, an aryl group, an alkyl ether, and combinations thereof containing from 1 to about 10 carbon atoms and having at least 1 epoxy functional group, and R^5 is H, an alkyl group containing from 1 to about *5* carbon atoms, an acetyl group, a $-Si(OR^6)_{3-y}R^7_y$ group where y is an integer of 0, 1, 2, or 3, where R^6 is H, an alkyl group containing from 1 to about 5 carbon atoms an acetyl group, another $-Si(OR^6)_{3-y}R^7_y$ group and combinations thereof, and R^6 is H, an alkyl group, a functionalized alkyl group, an alkylene group, an aryl group, an alkyl ether and combinations thereof containing from 1 to about 10 carbon atoms.

10. (Original) The article of claim 1 wherein the carboxylic acid functional compound present in the aqueous-organic solvent mixture is represented by the formula $R^8(COOR^9)_x$ where x is an integer of 1, 2, 3, or 4, and where R^8 is H, an alkyl group, a functionalized alkyl group, an alkylene group, an aryl group, a

functionalized aryl group, an alkyl ether, and combinations thereof containing from 1 to about 10 carbon atoms, and where R^9 is H, a formyl group, a carbonyl group, or an acyl group, where the acyl group can be functionalized with an alkyl group, a functionalized alkyl group, an alkylene group, an aryl group, a functionalized aryl group, an alkyl ether, and combinations thereof containing from 1 to about 10 carbon atoms, and where R^8 and R^9 may or may not be joined by a chemical bond.

11. (Original) The article of claim 1 wherein the aqueous-organic solvent mixture further contains alumina, silica, titania, zirconia, tin oxide, antimony oxide, iron oxide, lead oxide, bismuth oxide, and combinations thereof and wherein at least one of the metal oxide components present in the composite mixture is neither alumina nor silica.

12. (Original) The article of claim 1 wherein the amount of water present in the aqueous-organic solvent mixture is an amount sufficient to provide a substantially homogeneous mixture of hydrolysis products and partial condensates of all reactive components.

13. (Original) The article of claim 12 wherein the aqueous-organic solvent mixture further contains an effective amount of co-hydrolysis catalyst thereby enhancing the hydrolysis rates of the hydrolyzable components.

14. (Original) The article of claim 1 wherein the aqueous-organic mixture further contains an effective amount of a catalyst thereby providing enhanced abrasion resistance to a coating produced by curing the composition.

15. (Original) The article of claim 14 wherein the effective amount of the catalyst present in aqueous-organic solvent mixture is from about 0.01 to about 2 weight percent, based on the total solids of the composition.

16. (Original) The article of claim 1 wherein the aqueous-organic solvent mixture further comprises an effective amount of a leveling agent thereby allowing the aqueous-organic solvent mixture to be spread on the substrate thereby providing substantially uniform contact of the aqueous-organic solvent mixture with the substrate.

17. (Original) The article of claim 1 wherein the aqueous-organic solvent mixture further comprises from about 0.1 to about 70 weight percent, based on the total solids of the composition, of a mixture of hydrolysis products and

partial condensates of a silane additive represented by the formula $R^{15}_xSi(OR^{16})_{4-x}$ where x is an integer of 0, 1, 2 or 3, R^{15} is H, an alkyl group containing from 1 to about 10 carbon atoms, a functionalized alkyl group, an alkylene group, an aryl group an alkyl ether group and combinations thereof, R^{16} is H, an alkyl group containing from 1 to about 10 carbon atoms, an acetyl group and combinations thereof.

18. (Original) The article of claim 17 wherein the amount of water present in the aqueous-organic solvent mixture is an amount sufficient to provide a substantially homogeneous mixture of hydrolysis products and partial condensates of all reactive components.

19. (Original) The article of claim 18 wherein the aqueous-organic solvent mixture further comprises an effective amount of co-hydrolysis catalyst thereby enhancing the hydrolysis rates of the hydrolyzable components.

20. (Original) The article of claim 19 wherein the aqueous-organic solvent mixture further comprises an effective amount of a catalyst thereby providing enhanced abrasion resistance to a cured coating.

21. (Original) The article of claim 20 wherein the effective amount of the catalyst is from about 0.01 to about 2 weight percent, based on the total solids of the composition.

22. (Original) The article of claim 19 wherein the aqueous-organic solvent mixture further comprises an effective amount of a leveling agent thereby allowing the aqueous-organic solvent mixture to be spread on the substrate thereby providing substantially uniform contact of the aqueous-organic solvent mixture with the substrate.

23. (Currently Amended) An article having an abrasion resistant coating, the article comprising:

a substrate;

a substantially transparent abrasion resistant coating provided on at least one surface of the substrate, the substantially transparent abrasion resistant coating having a refractive index substantially corresponding to the refractive index of the substrate, the substantially transparent abrasion resistant coating being formed by curing an aqueous-organic solvent mixture containing hydrolysis products and partial condensates of an epoxy functional silane, a metal oxide composite colloid, a disilane, a carboxylic acid

functional compound, wherein the carboxylic acid functional compound is selected from the group consisting of monofunctional carboxylic acids, multifunctional carboxylic acids, anhydrides, and combinations thereof, and wherein the epoxy functional silane is present in a molar ratio to the disilane and the metal oxide composite colloid of from about 0.1:1 to 4:1 from about 0.1 to about 70 weight percent, based on the total solids of the aqueous-organic solvent mixture, of colloidal silica and wherein the amount of water present in the aqueous-organic solvent mixture is an amount sufficient to provide a substantially homogeneous mixture of hydrolysis products and partial condensates of all reactive components and an effective amount of a ~~leveling agent thereby allowing the aqueous-organic solvent mixture to be spread on the substrate so as to provide substantially uniform contact of the aqueous-organic solvent mixture with the substrate~~ catalyst thereby providing enhanced abrasion resistance to a cured coating ~~wherein the carboxylic acid functional compound is selected from the group consisting of monofunctional carboxylic acids, multifunctional carboxylic acids, anhydrides, and combinations thereof, and wherein the epoxy functional silane is present in a molar ratio to the disilane and the metal oxide composite colloid of~~

~~from about 0.1:1 to 4:1~~; ~~and wherein the amount of water present in the aqueous-organic solvent mixture is an amount sufficient to provide a substantially homogeneous mixture of hydrolysis products and partial condensates of all reactive components~~.

24. (Original) An article having an abrasion resistant coating found on at least one surface thereof, the abrasion resistant coating further having a refractive index, the abrasion resistant coating formed by applying an aqueous-organic solvent mixture to at least one surface of the article and thereafter curing the aqueous-organic solvent mixture to provide the abrasion resistant coating, the aqueous-organic solvent mixture comprising:

hydrolysis products and partial condensates of an epoxy functional silane, a metal oxide composite colloid, a disilane, a carboxylic acid functional compound is selected from the group consisting of monofunctional carboxylic acids, multifunctional carboxylic acids, anhydrides and combinations thereof, and from about 0.1 to about 70 weight percent, based on the total solids of the aqueous-organic solvent mixture, of a mixture of hydrolysis products and partial condensates of a silane additive represented by the formula $R^{15}_xSi(OR^{16})_{4-x}$ where x is an integer of 0, 1, 2 or 3, R^{15} is H, an alkyl group containing from 1 to about 10 carbon atoms, a functionalized

alkyl group, an alkylene group, an aryl group, an alkyl ether group and combinations thereof, R^{16} is H, an alkyl group containing from 1 to about 10 carbon atoms, an acetyl group and combinations thereof wherein the epoxy functional silane is present in a molar ratio to the disilane component and the metal oxide composite colloid component of from about 0.1:1 to 4:1; and

from about 0.1 to about 70 weight percent, based on the total solids of the aqueous-organic solvent mixture, of an acidic colloidal silica component, and

wherein the amount of water present in the aqueous-organic solvent mixture is an amount sufficient to provide a substantially homogenous mixture of hydrolysis products and partial condensates of all reactive components.

25. (Original) The article of claim 24 wherein the aqueous-organic solvent mixture further comprises an effective amount of co-hydrolysis catalyst to enhance the hydrolysis rates of the hydrolyzable components.

26. (Original) The article of claim 25 wherein the aqueous-organic solvent mixture further comprises an effective amount of a catalyst thereby providing enhanced abrasion resistance to a cured coating.

27. (Original) The article of claim 26 wherein the effective amount of the catalyst is from about 0.01 to about 2 weight percent, based on the total solids of the aqueous-organic solvent mixture.

28. (Original) The article of claim 27 wherein the aqueous-organic solvent mixture further comprises an effective amount of a leveling agent thereby allowing the aqueous-organic solvent mixture to be spread on the substrate thereby providing substantially uniform contact of the aqueous-organic solvent mixture with the substrate.

29. (Currently Amended) An article having an abrasion resistant coating and a refractive index, the article comprising:

a substrate;

a coating composition applied to at least one surface of the substrate and cured to provide the substrate with an abrasion resistant coating having a refractive index, the coating composition comprising:

an aqueous-organic solvent mixture containing hydrolysis products and partial condensates of an epoxy functional silane, a metal oxide composite colloid, a disilane, a carboxylic acid functional compound

selected from the group consisting of monofunctional carboxylic acids, multifunctional carboxylic acids, anhydrides and combinations thereof, ~~from about 0.1 to about 70 weight percent, based on the total solids of the composition, of silica and an effective amount of a leveling agent thereby allowing the aqueous-organic solvent mixture to be spread on the substrate thereby providing substantially uniform contact of the aqueous-organic solvent mixture with the substrate~~ and further wherein the epoxy functional silane is present in a molar ratio to the disilane component and the metal oxide composite colloid component of from about 0.1:1 to 4:1; and

from about 0.1 to about 70 weight percent, based on the total solids of the composition of a colloidal silica component, wherein the colloidal silica component is acidic, basic or neutral.

30. (Original) The article of claim 29 wherein the colloidal silica component present in the aqueous-organic solvent mixture is an acidic colloidal component.

31. (Original) The article of claim 30 wherein the amount of water present in the aqueous-organic solvent mixture is an amount sufficient to provide a substantially homogeneous mixture of hydrolysis products and partial condensates of all reactive components.

32. (Original) The article of claim 31 wherein the aqueous-organic solvent mixture further comprises an effective amount of co-hydrolysis catalyst thereby enhancing the hydrolysis rates of the hydrolyzable components.

33. (Original) The article of claim 32 wherein the aqueous-organic solvent mixture further comprises an effective amount of a catalyst for providing enhanced abrasion resistance to the cured coating.

34. (Original) The article of claim 33 wherein the effective amount of the catalyst is from about 0.01 to about 2 weight percent, based on the total solids of the composition.

35. (Original) An article having an abrasion resistant coating formed on at least one surface thereof, the abrasion resistant coating further having a refractive index, the abrasion resistive coating found by applying an aqueous-organic solvent mixture to at least one surface of the article and thereafter

curing the aqueous-organic solvent mixture to provide the abrasion resistant coating, the aqueous-organic solvent mixture comprising:

an aqueous-organic solvent mixture containing hydrolysis products and partial condensates of an epoxy functional silane, a metal oxide composite colloid, a disilane, a carboxylic acid functional compound selected from the group consisting of monofunctional carboxylic acids, multifunctional carboxylic acids, anhydrides and combinations thereof, and from about 0.1 to about 70 weight percent, based on the total solids of the composition, of a mixture of hydrolysis products and partial condensates of a silane additive represented by the formula $R^{15}_xSi(OR^{16})_{4-x}$ where x is an integer of 0, 1, 2 or 3, R^{15} is H, an alkyl group containing from 1 to about 10 carbon atoms, a functionalized alkyl group, an alkylene group, an aryl group an alkyl ether group and combinations thereof, R^{16} is H, an alkyl group containing from 1 to about 10 carbon atoms, an acetyl group and combinations thereof and wherein the epoxy functional silane is present in a molar ratio to the disilane and the metal oxide composite colloid of from about 0.1:1 to 4:1;

and from about 0.1 to about 70 weight percent, based on the total solids of the composition, of a colloidal silica component, and wherein the colloidal silica component is acidic, basic or neutral.